

IN THE CLAIMS:

1-51. (Cancelled)

52. (New) A method of producing a gas discharge panel, comprising:

providing a first plate with partition walls and a phosphor layer;

providing a second plate;

providing a sealing material on at least one of the first plate and second plate;

forming an envelope of the second plate over the first plate to enable the partition walls to form light emitting cells;

applying a dry gas to the envelope;

exhausting gases from the envelope while heating the envelope below a sealing temperature of the sealing material for a sufficient time period to enable burn out of binding material of the sealing material;

monitoring the gas pressure applied to an inside of the envelope;

increasing the heat applied to the sealing material at the sealing temperature to enable softening of the sealing material;

determining from the gas pressure monitoring, when the gas pressure is increasing in the envelope;

lowering an internal pressure in the envelope, based on the monitoring of gas pressure, below an external pressure to apply a force to assist sealing of the first plate to the second plate;

lowering the temperature applied to the sealing material to solidify a peripheral seal;

21 apply a cleansing gas after the envelope is sealed;
22 gradually lower the temperature to ambient temperature;
23 continuing to monitor the gas pressure applied within the envelope to determine
24 any leaks in the peripheral seal;
25 applying a discharge gas to the sealed envelope, if no leaks are determined,
26 through a gas passageway; and
27 closing the gas passageway to seal the discharge gas within the envelope.